

Title (en)
Conversion of propane to acrylic acid.

Title (de)
Konversion von Propan zu Acrylsäure.

Title (fr)
Conversion du propane en acide acrylique.

Publication
EP 0117146 A1 19840829 (EN)

Application
EP 84301079 A 19840220

Priority
US 46852783 A 19830222

Abstract (en)
Propane is converted to acrylic acid in an integrated three-stage process. Propane is dehydrogenated in a first stage to propylene, hydrogen, and by-products. The reaction effluent is passed into a second stage where propylene is oxidized to acrolein without significant oxidation of the hydrogen and by-products. The effluent from the second stage may be passed as feed to a third stage for the oxidation of acrolein to acrylic acid. The acrylic acid is recovered as the primary product, while the unconverted propane may be separated and recycled to the first stage for dehydrogenation.

IPC 1-7
C07C 51/215; **C07C 51/25**; **C07C 57/04**; **C07C 5/333**; **C07C 11/06**; **C07C 45/35**; **C07C 47/22**

IPC 8 full level
C07C 45/33 (2006.01); **C07C 45/35** (2006.01); **C07C 51/00** (2006.01); **C07C 51/215** (2006.01); **C07C 57/05** (2006.01); **C07C 57/055** (2006.01); **C07C 67/00** (2006.01)

CPC (source: EP)
C07C 45/33 (2013.01); **C07C 45/35** (2013.01); **C07C 51/215** (2013.01)

Citation (search report)
[E] GB 2118939 A 19831109 - HALCON SD GROUP INC

Cited by
US7348443B2; DE102008044946A1; US6166263A; CN100357243C; CZ301444B6; US6057481A; US5684188A; US5198580A; CN105408297A; EP0731077A3; US5705684A; CN1086690C; CN1077562C; US5855743A; US6090977A; EP1642879A1; US5817865A; EP0958860A3; CZ304548B6; WO2021191042A1; WO0010957A1; WO2010027732A1; WO2007051750A3; WO9736849A1; WO0196271A3; US6492548B1; US7488858B2; US6541664B1; WO2011000808A2; US7157598B2; US7897812B2; US7910766B2; WO03011804A3; WO2009028292A1; DE102009027401A1; US6781017B2; DE102010001228A1; US8362299B2; DE102008041573A1; US6423875B1; US6252122B1; US7524987B2; WO2024133081A1; US7601866B2; DE102008040799A1; US6433222B1; US9718756B2; US7488857B2; DE102008042008A1; DE102007006647A1; US6448439B1; US7518024B2; WO2008074787A1; US7287534B2; US8080686B2; US7482500B2; EP2075243A1; US7321058B2; US6700016B1; US6921837B2; US6239325B1; EP0784046A1; US7485761B2; US7173143B2; US6187963B1; US8299299B2; WO2024089252A1; US6410785B1; DE102010042216A1; WO2012045738A1; US8404888B2; US9212122B2; US9776940B2; EP2143704A1; DE102007043759A1; DE102008042010A1; DE102007043748A1; US7396956B2; US7238827B2; US7326802B2; US6350906B2; US7592483B2; US6348638B1; US8431743B2; US8530717B2; WO2020020697A1; US11447439B2; EP2143701A1; WO2010023053A2; DE102008042009A1; DE102007043758A1; US7087782B2; US7705181B2; US7750194B2; DE102008044946B4; EP2070900A2

Designated contracting state (EPC)
BE DE FR GB IT NL

DOCDB simple family (publication)
EP 0117146 A1 19840829; **EP 0117146 B1 19861230**; DE 3461782 D1 19870205; JP S59163340 A 19840914

DOCDB simple family (application)
EP 84301079 A 19840220; DE 3461782 T 19840220; JP 3225084 A 19840222